



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,966	10/24/2003	Mark A. Cleveland	024.0029	1845

29906 7590 04/11/2006

INGRASSIA FISHER & LORENZ, P.C.  
7150 E. CAMELBACK, STE. 325  
SCOTTSDALE, AZ 85251

EXAMINER

PARSLEY, DAVID J

ART UNIT PAPER NUMBER

3643

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/692,966	<b>Applicant(s)</b> CLEVELAND, MARK A.	
	<b>Examiner</b> David J. Parsley	<b>Art Unit</b> 3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.  
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-11 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1,2 and 4-11 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 22 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **Detailed Action**

#### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2-28-06 has been entered.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent Application Publication No. 2003/0196544 to Comtesse.

Referring to claim 1, Comtesse discloses a low shock separation joint for coupling a first structure to a second structure comprising, a male member – at 14,32,34,36, having a first major

Art Unit: 3643

surface – on one side, and a second major surface – on any other side, wherein at least one projection – at 32,36, is formed on the first and second major surface – see for example figure 1, a split female member – at 10,12, having a first half structure – at 12, and a second half structure – at 10, the first half structure including a first flange – at the upper portion of 12, and the second half structure including a second flange – at 40,50, wherein at least one projection is formed on the first and second flange – see – at the upper portion of 12 and – at 50 in figure 1, wherein surfaces of the at least one projection on the first and second flange are respectively mated to surfaces of the at least one projection on the first and second major surfaces of the male member – see figures 1-2, to prevent separation of the separation joint under tensile and compressive forces – see figures 1-2, and the female member being configured to clamp and hold the male member without any fastening mechanism holding the first flange and the second flange to the male member – see figures 1-2, a cavity – at 20, formed within the female member when the first half structure and the second half structure are placed together – see figures 1-3, the first and second flanges extending away from the cavity – see figures 1-3, and the female member separating the cavity from the male member when the first half structure and the second half structure are placed together – see figures 1-3, and an explosive device – at 16, within the cavity of the female member – see figures 1-3, the explosive device when detonated releases the male member from the female member – see figure 3, by bending and physically modifying the second flange away from the male member – see figure 3, without causing breakage of any component of the separation joint – see for example figures 1-3. Comtesse does not disclose bending and physically modifying the first flange. However, this is an intended use/functional limitation in an apparatus claim and it is deemed that the device of Comtesse is capable of

Art Unit: 3643

performing the function of bending and physically modifying the first flange in that the pyrotechnic tube – at 16, expands to contact the inner walls of the first flange – at 12 as seen in figure 3, and therefore provides forces acting upon the flange – at 12 which can at least cause some bending or strain on the first flange.

Referring to claim 2, Comtesse discloses the female member – at 10, 12, includes a mount – see at the bottom of 12, for attachment to the first structure – see figures 1-2.

Referring to claim 8, Comtesse discloses the explosive device – at 16, has a first volume – see figures 1-2, within the cavity – at 20, of the female member prior to detonation, wherein the explosive device has a second volume after detonation – see figure 3, and wherein the second volume is greater than the first volume – see for example figures 1-3.

Referring to claim 9, Comtesse discloses the explosive device includes an expandable housing – at 16, around an explosive material – see figures 1-3, and wherein the expandable housing does not rupture when the explosive material is detonated – see figures 1-3.

Referring to claim 10, Comtesse discloses the male member further includes a mount – see at 34, for attachment to the second structure – see for example figures 1-2.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comtesse as applied to claim 1 above, and further in view of U.S. Patent No. 5,735,626 to Khatiblou et al.

Referring to claim 4, Comtesse does not disclose a clevis is formed for receiving the first structure when the first and second half structures of the female member are coupled together and wherein the clevis comprises a portion of both the first and second half structures of the female member. Khatiblou et al. does disclose a clevis – see between items 28,30, in figures 1-3, for receiving the first structure – at 16, when the first and second half structures of the female are coupled together and wherein the clevis comprises a portion of both the first and second half structures of the female member – see for example figures 1-3. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Comtesse and add the clevis connection of Khatiblou et al., so as to allow for the female member to be securely held to the first structure.

Referring to claim 5, Comtesse as modified by Khatiblou et al. further discloses the male member is placed between the first and second flanges and wherein fastening the first structure to the female member couples the female member to the male member – see at 10,12,14 in figures 1-3 of Comtesse.

Referring to claim 6, Comtesse as modified by Khatiblou et al. further discloses the at least one projection of the first and second flange mated respectively to the surfaces of the projection of the first and second major surface of the male member are non-locking – see for example at 32,36,22,40,50 in figures 1-3 of Comtesse.

Referring to claim 7, Comtesse as modified by Khatiblou et al. further discloses the explosive device when detonated bends the first and second flange – at 38, away from the male

Art Unit: 3643

member – at 14 – see for example figures 1-3 of Khatiblou et al. and wherein the first and second flange move in an arc away from the male member – see for example figures 1-3 of Khatiblou et al. where the flanges – at 38, must bend and physically change shape/orientation to disengage the projections – at 40-44 from the projections of the male member – at 50,54.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Comtesse as applied to claim 1 above, and further in view of U.S. Patent No. 4,879,941 to Repe et al.

Referring to claim 11, Comtesse does not disclose the female member comprises a deformable metal. Repe et al. does disclose the female member – at 2,3,7, comprises a deformable metal – see for example figures 2-4 of Repe et al. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Comtesse and add the female member comprising a deformable metal, so as to allow for the device to be both durable and flexible.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-2 and 4-11 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Art Unit: 3643

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Parsley whose telephone number is (571) 272-6890.

The examiner can normally be reached on Monday-Friday from 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571) 272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Parsley  
Patent Examiner  
Art Unit 3643